

**GEORGE R. EDGAR**

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Madison, Wisconsin 53719  
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***Employment***

6/99 – Present

**Director-Policy**

Wisconsin Energy Conservation Corporation

Provide consulting services on energy policy and demand-side management/energy conservation issues to a variety of clients, including utilities, state commissions, consumer and environmental groups.

8/12/91 – 5/99

**Executive Director**

Wisconsin Energy Conservation Corporation

Provide consulting services on energy policy and demand-side management/energy conservation issues to a variety of clients, including utilities, state commissions, consumer and environmental groups. Administered the overall operations of WECC.

6/1/89 - 8/9/91

**Partner**

Boardman, Suhr, Curry & Field  
One South Pinckney Street, Suite 140  
Madison, Wisconsin

Energy and environment practice primarily for municipal electric utilities; also represented large industrial gas users at the FERC.

5/1/86 - 2/24/89

**Commissioner**

Public Service Commission of Wisconsin  
Madison, Wisconsin

Involved with development of Integrated Resource Planning, energy efficiency policy, transmission access policy, natural gas restructuring issues and utility diversification as well as telecommunications restructuring issues.

3/1/83 - 4/30/86     **Executive Assistant to the Chairman**

Public Service Commission of Wisconsin  
Madison, Wisconsin

Served as Chief of Staff and Administrator (subject to Chairman's authority); co-drafter of Wisconsin statutes on utility diversification and telecommunications regulations; involved in development of PSCW policy on external nuclear decommissioning funds; energy efficiency (DSM) programs; natural gas restructuring and new pipelines in Wisconsin; and electric transmission access policies.

1981 - 2/15/83     **Legal Director**

Citizens' Utility Board  
Madison, Wisconsin

Represented residential customers in electric, natural gas, and telecommunications proceedings before the Public Service Commission of Wisconsin.

1976 - 1980     **Director of Consumer and Utility Litigation**

Legal Action of Wisconsin  
Milwaukee, Wisconsin

Represented low-income consumers in electric and natural gas proceedings before the Public Service Commission of Wisconsin as part of legal services attorney position in which consumer and civil rights litigation was also prominent.

***Education***

- J.D., University of Wisconsin, May 1975
- B.A., University of Virginia, 1969  
Degree with Distinction  
Major: Government and Foreign Affairs

***Authorized to Practice Law***

State of Wisconsin  
Eastern and Western District Federal Courts in Wisconsin  
Seventh Circuit Federal Court of Appeals  
District of Columbia Federal Court of Appeals

**George R. Edgar**  
**Director**

George Edgar is the Director of policy at WECC and has expertise in energy, regulatory and IRP/demand-side policy and DSM program design, development and implementation. Mr. Edgar was Executive Director at WECC from 1991 to mid 1999. He has been involved in the field of energy policy and regulation as a lawyer, consultant, and regulator since 1976. As Executive Director, Mr. Edgar was responsible for directing WECC's staff of demand-side planning/program specialists, evaluators, engineers, analysts, building scientists, computer programmers, and trainers.

Mr. Edgar has extensive experience with energy policy and regulatory and ratemaking policy and practices ranging from matters of utility diversification to the development and implementation of Integrated Resource Programs to issues of utility accounting, finances, and rate design. As the Executive Assistant to the Chairman and a Commissioner on the Public Service Commission of Wisconsin (PSCW) during the 1980s, he was involved in the development of trend-setting activities by that Commission including the adoption of external nuclear decommissioning funds, the incorporation of environmental externalities into IRP planning, the development of plans for transmission access, and the development of an aggressive Integrated Resource Planning/ Demand-Side Planning process for the state's investor owned utilities.

As a Commissioner on the PSCW between May 1, 1986, and March 1, 1989, Mr. Edgar was extensively involved in the development of least-cost/demand-side planning in the State of Wisconsin. He was particularly involved with the development of the Least Cost Planning guidelines developed in Advance Plan V in 1989 and the development of regulatory oversight of the individual utility demand-side efforts including the Commission's Order directing the Smart Money program by the Wisconsin Electric Power Company in 1988. Included in these efforts were attempts to develop incentive mechanisms to further the implementation of DSM measures including the use of the first DSM performance incentives that tied incentives to savings (e.g., Wisconsin Electric Power Company and Madison Gas and Electric Company).

Below is a summary of Mr. Edgar's current and most recent projects.

- Co-Chair of the Technical Advisory Group and the Conservation & Energy Efficiency work groups of the Governors' Task Force on Global warming in Wisconsin
- Member of a team consulting with Lawrence Berkeley Labs on design and impacts of utility shareholder incentive mechanisms for energy efficiency
- Prepared responses by the Citizens Utility Board and Clean Wisconsin to questions posed by the Public Service Commission of Wisconsin on determining the appropriate generation reserve margin in Wisconsin.
- Facilitator of a report by 5 Wisconsin utilities and 2 consumer groups on the impact of the Midwest ISO on Wisconsin ratepayers
- Testimony on behalf of the North Carolina Sustainable Energy Association on the appropriate cost tests for assessing Demand-Side Management and potential administrative structures in the biennial Integrated Resource Planning proceeding before the North Carolina Utilities Commission
- Member of the Governor's Task Force on Energy Efficiency & Renewables (co-chair of Administrative Framework working group) and involved in drafting Act 141 that revised Wisconsin's "Public Benefits" program

- Design assistance to Vectren Gas (Indiana) for natural gas energy efficiency pilots including a targeted income program together with Cinergy (Indiana)
- Testimony in various Wisconsin Power & Light and Wisconsin Public Service Corporation and Madison Gas & Electric rate cases on cost of service, rate design, demand response and energy efficiency issues
- Developed residential and small commercial energy efficiency programs for Minnesota Power & Light
- Member of the Dane County and Southeast Wisconsin Energy Initiatives investigating the need for and potential to defer new EHV transmission facilities in Dane County and southeast Wisconsin
- Witness for Wisconsin CUB in Arrowhead-Weston 345 kV transmission line case concerning need for a new EHV transmission facility between Wisconsin and Minnesota
- Submitted comments to PSCW on behalf of environmental and consumer groups concerning the need for increased transmission access from Wisconsin into the rest of the Midwest Independent System Operation system
- Witness for Wisconsin CUB on the need and contract terms for a proposed Sheboygan Falls generation facility by Alliant Energy
- Witness for Wisconsin CUB in approval for issuance of environmental trust financing bonds by We-Energies
- Consultant on a team to the Vermont Department of Public Services to develop an RFP to create an “Energy Efficiency Utility” which will administer all “public benefits” energy efficiency programs in Vermont—including development of the contract establishing the initial EEU
- Developed DSM plans and programs for the Gas Company’s (Hawaii) 1998 Integrated Resource Plan filing
- Lead author and evaluator of Public Service Electric & Gas’ “Standard Offer Program” for PSE&G and New Jersey BPUC
- Worked as a consultant to the California Board for Energy Efficiency until December, 1998, to transfer utility programs and funds to the independent “Public Benefits” Board and to develop Board policies, rules and solicitations for Administrators for energy efficiency programs in all customer sectors
- Provided assistance to BC Gas on a project using energy efficiency to all customer classes to defer the need for facilities construction in a targeted area of BC Gas’ system
- Testimony on behalf of the HVAC Coalition of Canada before the Ontario Energy Board concerning the need and methods for governing anti-competitive utility practices in non-regulated markets
- Directed and was the primary author of an evaluation of the competitive impacts of two utility energy services affiliates (ENvest and TEEM) for the Commission Advisory and Compliance Division of the California Public Utilities Commission. The focus of this evaluation was on the characteristics of a workable, competitive energy efficiency market and the impact of the two utility programs on the large C&I market.
- Directed and was the primary author of an evaluation of DSM bidding pilot projects for the Commission Advisory and Compliance Division of the California Public Utilities Commission. This study was designed to determine the effectiveness of DSM bidding as a regulatory strategy for fostering a competitive market in various market sectors and to assess whether DSM bidding results

in increased energy and demand savings in the targeted market sectors and/or reduced costs for achieving these savings.

- Conducted an evaluation and was a primary author of an evaluation of DSM shareholder incentives mechanisms in California for the Commission Advisory and Compliance Division of the California Public Utilities Commission. This study evaluated the effects of incentive mechanisms used for four major California utilities and assessed the need for and effectiveness of DSM incentives as a regulatory strategy. This study also assessed the balance of risks and rewards for ratepayers and shareholders, evaluated market transformation, explored the role of measurement and evaluation in the regulatory process, and compared and contrasted various options for incentive mechanisms.
- Performed an analysis with Tellus Institute for six California consumer and environmental groups on the potential issues and impacts of restructuring on small and low-income customers.
- Provided consulting assistance to BC Gas in developing strategies to approach a restructured industry as well as assisting in the development of DSM program strategies and IRP objectives.
- Directed the program design and implementation of five (5) comprehensive community-based demand-side projects. The aim of the projects is to maximize savings through increased participation that will also result in a transformation of the energy efficiency markets to produce high levels of reliable and persistent savings. The projects uses price and non-price signals to increase participation and to minimize the use of rebates in favor of a method whereby customers pay for utility-installed DSM measures out of cash flow energy savings. The projects involve joint design and delivery by the community's electric, natural gas, and water providers.
- Presented testimony on behalf of the Consumers Association of Canada (Ontario) before the Ontario Energy Board on Integrated Resource Planning for natural gas utilities. This case involved the development of an IRP/DSM planning process for the major gas utilities in the province of Ontario. Testimony covered IRP/DSM planning, regulatory process, the monetization of externalities, DSM program design and delivery, and cost recovery/ incentive issues.

Prior to joining WECC, Mr. Edgar was a partner in the Madison, Wisconsin law firm of Boardman, Suhr, Curry & Field where he represented municipal utilities at the Federal Energy Regulatory Commission on various matters including transmission access and pricing issues as well as provided legal assistance on environmental compliance and demand-side issues. He also represented large industrial gas users at the FERC in pipeline rate cases and transportation pricing cases.

As Executive Assistant to the Chairman at the PSCW (prior to being appointed Commissioner), Mr. Edgar was responsible (with the Chairman) for the administration and operation of the agency. As a chief staff person, he was responsible for policy development and was extensively involved in the development of the Commission's policies concerning utility financial matters, including capital structure and return, utility diversification, environmental policy including nuclear decommissioning accounting treatment and energy conservation policy. He was particularly involved with the drafting of the State of Wisconsin's legislation on utility diversification and a new regulatory structure for telecommunication utilities.

From 1981 to 1983, Mr. Edgar was the attorney for the Citizens Utility Board, a legislatively created consumer advocacy agency. In this capacity, he participated in numerous rate cases and generic cases ranging from the establishment of utility low-income weatherization and arrearage programs to utility fuel purchasing practices. Prior to joining CUB, Mr. Edgar was the Priority Coordinator of Consumer and Utility Litigation for Legal Action of Wisconsin, a federally funded legal services program, where in addition to litigation on consumer, housing, and civil rights issues, he represented low-income groups before the PSCW.

## SELECTED OTHER TESTIMONY BEFORE REGULATORY AGENCIES

- (1) Testimony before the Ontario Energy Board on behalf of the Consumers Association of Canada (Ontario) on natural gas Integrated Resource Planning in Docket EBO 169 in December, 1992 based on the document: *Report on Integrated Resource Planning for Natural Gas Distribution Utilities*, prepared by George R. Edgar and dated February 26, 1992.
- (2) Testimony before the California Public Utilities Commission as a witness called by the Commission concerning the report prepared for the Commission entitled: *Evaluation of DSM Shareholder Incentive Mechanisms* by Jeff Schlegel, George R. Edgar et al. dated January 8, 1993 in Docket R. 91-08-003. Testimony was given in June, 1993, and May, 1994. In the first instance, testimony concerned the influence of market to book prices on utility interest in DSM and comparability between supply and demand-side utility investments. The second testimony concerned the design of shareholder incentives mechanisms for DSM.
- (3) Testimony before the California Public Utilities Commission as a witness called by the Commission concerning financial, cost of capital, and share value growth issues as part of the Commission's evaluation of shareholder incentives. Cross-examination was based in part on the report referred to above. Docket No. R.91-08-003; Cross examination on June 30, 1993.
- (4) Testimony before the Arizona Corporation Commission on behalf of the Arizona Residential Utility Consumer Office on Integrated Resource Planning for electric utilities based on the document: *Report of Wisconsin Energy Conservation Corporation on Behalf of the Arizona Residential Utility Consumer Office on Utility IRP Plans* filed in ACC Docket No. U-000-93-052. Testimony given on December 9, 1993.
- (5) Testimony before the British Columbia Utility Commission on behalf of BC Gas regarding the DSM programs proposed by BC Gas in its Integrated Resource Plan filing in Re BC Gas Utility LTD., 1994/95 Revenue Requirements Application, Phase 3. Testimony was given in June, 1994.
- (6) Testimony before the Illinois Commerce Commission on behalf of the City of Chicago concerning whether Illinois should adopt Section 111 (d) (8) of the Energy Policy Act of 1992 in Docket 94-0426. Testimony was given in April, 1995.

- (7) Testimony before the Illinois Commerce Commission in Docket 92-0268 on behalf of the City of Chicago to better align the private financial and business interests of Commonwealth Edison and its pursuit of DSM. Testimony filed in January, 1994. Cross-examination was waived by the other parties in the docket.
- (8) Testimony before the Illinois Commerce Commission in Docket No. 93-0425 on behalf of the City of Chicago concerning whether to approve a Rate CS tariff that allowed Commonwealth Edison to selectively discount rates to large customers who might bypass the Edison system. Testimony was given in March, 1994.
- (9) Testimony before the Hawaii Public Service Commission in Consolidated Docket No. 94-0097 and 94-0308 on behalf of Kauai Electric concerning the regulatory standards and practices concerning the collection or recovery of damage costs from catastrophic storms. Testimony was given in May, 1995.
- (10) Testimony before the Hawaii Public Service Commission on behalf of the Hawaiian electric utilities concerning the creation of a storm damage reserve for Hawaii utilities. Docket No. 95-0051, September, 1995.
- (11) Testimony before the British Columbia Utility Commission on behalf of BC Gas concerning the development of a DSM shareholder incentive mechanism and DSM programs submitted in BC Gas' 1996-98 Revenue Requirement Application in August, 1995.
- (12) Testimony before the Ontario Energy Board on behalf of the Consumers Association of Canada in Docket EBO 188 concerning system expansion policies and tests for natural gas utilities in Ontario. Testimony filed November 6, 1995.
- (13) Testimony before the Public Service Commission of Wisconsin in the Wisconsin Electric Power Company rate case, Docket 6630-UR-109 concerning the predicates needed for the development of more effectively competitive energy efficiency markets.
- (14) Testimony on behalf of the Consumers Association of Canada et al. in Docket E.B.O. 492 and 495 before the Ontario Energy Board concerning the appropriate accounting and ratemaking treatment of resources and goods among regulated core utility services, ancillary services and unregulated services for Consumers Gas Company, Ontario Canada. I am currently working in a collaborative effort with Consumers Gas and other parties to develop an appropriate cost allocation method and process.

- (15) Testimony on behalf of the Texas Department of Housing to present DSM program design and delivery testimony in a Central Power & Light rate case on behalf of low-income consumers.



## SELECTED PUBLICATIONS, PAPERS, AND CONFERENCE PRESENTATIONS

Various presentations on energy efficiency policy and program design/administration/delivery, and demand response at ACEEE/CEE Market Transformation symposiums; ACEEE summer study and Midwest Energy Efficiency Association (MEEA)

“Gas Utility DSM In Ohio: Successful Models for Gas Utility DSM” Presentation at the Gas Integrated Resource Planning Seminar, April 21, 1994 in Columbus, Ohio

“Financial Incentives to Utilities and to Customers: They Work But Are We Only Buying Trouble?” Presentation at the NARUC's Fifth National Conference on Integrated Resource Planning, May 15-18, 1994 in Kalispell, Montana

“Comment” in *Changing Patterns in Regulation, Markets, and Technology: The Effect on Public Utility Pricing* at pp. 33-37. (1984 Proceedings of the Institute of Public Utilities Fifteenth Annual Conference, Williamsburg, VA)

“Do Shareholder Incentives Work? Results of an Evaluation of DSM Shareholder Incentives in California” published in *Energy Program Evaluation: Uses, Methods, and Results*, Proceedings of the 1993 Energy Program Evaluation Conference (Chicago, 1993)

“Blunting Risk With Caution: The Next Step for Least-Cost Planning” published in *The Electricity Journal*, July, 1990

“Utilities Role in Transforming the Marketplace for Energy Efficiency” presented at the Canadian National Dialogue on DSM Issues, October 1, 1993 in Ottawa, Ontario

“Wisconsin Lines” by George R. Edgar. Published in *Public Power*, pp. 23-27. July - August, 1989 (Article on Wisconsin statewide transmission system)

“Energy Utility Diversification: Its Status in Wisconsin” by J. Robert Malko and George R. Edgar. Published in *Public Utilities Fortnightly*, vol. 118, No. 3, 8/7/86 (pp. 20-24)

“After Construction: What Next?” by George R. Edgar and J. Robert Malko. Published in *The Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation*, edited by Patrick C. Mann and Harry M. Trebing, Michigan State University Public Utilities Papers (1985)

“Electric Utility Diversification and the Role of the Regulator” by George R. Edgar and J. Robert Malko. Published in the *Proceedings of Current Issues Challenging the Regulatory Process Conference* (New Mexico State University, April 1987)

“Electric Utilities As Part of Diversified Business: Some Considerations and Thoughts” by George R. Edgar and J. Robert Malko. Presented at the 13th Annual Rate Symposium, Pricing Electric, Gas and Telecommunications Services (The Institute for Study of Regulation and The University of Missouri-Columbia, February 1987)

“Energy Utility Diversification and Small Business: A Wisconsin Perspective” by J. Robert Malko and George R. Edgar. Published in *The Journal of Energy and Development* (August 1987 at pp. 101-111)